

REMARKS/ARGUMENTS

Claims 1, 6, 9, 12, 14-17, 21, and 23 are pending in the present application. Claims 1, 6, 9, 12, 15-17 and 21 are amended. Claims 2-5, 7-8, 10-11, 13, 18-20, 22, and are canceled. Support for the claim amendments can be found in the specification on page 10, lines 17-26, page 11, lines 1-6, page 14, lines 4-26, page 15, lines 1-2, and page 16 lines 6-26. No new matter is added. Reconsideration of the claims is respectfully requested.

Applicants have amended some claims and canceled others. Applicants do not concede that the subject matter encompassed by the earlier presented claims is not patentable over the art cited by the Examiner. Applicants canceled claims in this response solely to facilitate expeditious prosecution of this application. Applicants respectfully reserve the right to pursue the claims as presented prior to this amendment, and additional claims, in one or more continuing applications.

I. 35 U.S.C. § 102, Anticipation

The examiner has rejected claims 1-14 and 16-24 under 35 U.S.C. § 102 as being anticipated by Chui (U.S. 2003/0158609) (hereinafter "Chui"). Claims 2-5, 7-8, 10-11, 13, 18-20, 22, and 24 are canceled. Therefore the rejection with respect to these claims is moot. The rejection with respect to the remaining claims is respectfully traversed.

Regarding the rejected claims, the Examiner states:

With regard to Claims 1, 16, and 17, *Chui* teaches a *method, apparatus* (power management system, user interfaces) (see at least paragraph 0029) *and computer program product* (software functions) (see at least paragraph 0033) *in a data processing system* (data communications), *for controlling execution of applications, the method comprising* (multi-function device, PDA) (see at least paragraph 0016):

setting a policy for an application (user may specify, via user power options **110**), *wherein the policy indicates how to control execution of the application while the data processing system is using a limited resource* (the system is configured to preset a minimum power level cutoff for each component) (see at least paragraph 0021)

responsive to initialization of the application while the data processing system is using the limited resource, controlling when to execute the application as determined by the policy (may configure the system to disable the PDA components when the available power drops below 40%) (see at least paragraph 0022).

responsive to execution of the application while the data processing system is using the limited resource, controlling access of the application to specific elements of the data processing system that affect the limited resource (a user may configure the system to disable the transmission of messages when the

power drops below a given percentage, but to keep a receiver function active)
(see at least paragraph 0023).

Office Action dated April 1, 2008, p. 3.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). In this case, *Chui* does not show each and every feature of the presently claimed invention is not identically shown in the cited reference, arranged as they are in the claims.

I.A. Independent claims 1, 12, 16, and 17

Applicants have amended claims 1, 12, 16, and 17. Claim 1 as amended is as follows:

1. (Currently Amended) A method, in a data processing system, for controlling execution of applications, the method comprising:
 - setting a policy for an application, wherein the policy indicates how to control execution of the application while the data processing system is using a limited resource, wherein the limited resource is battery power, and wherein the policy comprises rules that indicate whether to execute the application, terminate the application, delay execution of the application, or suspend execution of the application until a specified element of the data processing system are non-idle;
 - responsive to initialization of the application while the data processing system is using the limited resource, determining whether the application belongs to a list of permitted applications;
 - responsive to determining that the application belongs to the list of permitted applications, permitting execution of the application;
 - responsive to determining that the application does not belong to the list of permitted applications, determining whether the application belongs to a list of banned applications;
 - responsive to determining that the application does not belong to the list of banned applications, prompting a user for a policy decision; and
 - responsive to execution of the application while the data processing system is using the limited resource, controlling access of the application to the specific elements of the data processing system that affect the limited resource.

The Examiner cites to several portions of *Chui* as teaching the features of the claimed invention.

The following portion provides a brief summary of the invention described in *Chui*:

[0010] These objects, and others, are achieved by providing a power management system for a portable device that uses a variety of techniques for dynamically controlling the allocation of power among components of the portable device. A power-priority scheme

progressively disables, or reduces the power to, individual components of the device, such that lesser important functions are disabled sooner, to provide a longer power duration to more important functions, such as data-retention functions. A performance-dependent scheme continuously adjusts the power to select components to maintain a minimum performance level, thereby avoiding power consumption for more-than-necessary performance. A user of the device is provided options for effecting the desired power-prioritization, and levels of performance.

Chui describes a method for dynamically controlling the allocation of power among components of a portable device using a power priority scheme that progressively disables or reduces power to individual components. *Chui* teaches that a user is presented options via interfaces, where the user can specify a power level for each component in the portable device. The system can then automatically determine a power-level cutoff for each component.

However, *Chui* does not teach the use of a policy, that determines how to execute an application. *Chui* teaches controlling a component of the portable device, not an application executing on the portable device. Additionally, *Chui* does not teach acknowledgement of an application and then determining whether the application belongs to a list of permitted or banned applications as claimed in amended claim 1. Therefore, *Chui* fails to anticipate claim 1. Accordingly, the rejection under 35 U.S.C. 102 is overcome.

Independent claims 12, 16, and 17 recite similar subject matter with regard to claim 1. Independent claims 12, 16, and 17 are not anticipated for the reasons stated above with regard to similarly recited subject matter.

I.B. Claim 6

In rejecting claim 6 the Examiner states:

With regard to claims 6 and 22, *Chui* teaches wherein controlling access of the application to specific elements of the data processing system includes stalling access to a specified element of the data processing system by the application until the specified element is non-idle (“miser” profile) (see at least paragraph 0007).

Office Action on April 1, 2008, page 4.

Applicants have canceled claim 22 and amended claim 6 to incorporate the features of claim 22. The rejection with respect to claim 6 is respectfully traversed. Amended claim 6 states:

6. (Currently Amended) The method of claim 1, wherein controlling access of the application to specific elements of the data processing system comprises:
determining whether the execution of the application is restricted;
responsive to determining that the execution of the application is not restricted, permitting normal execution of the application;
responsive to determining that the application is restricted, determining whether to delay execution of the application until the specific element of the data processing system is available;

responsive to determining that the application has access to the specific element, determining whether the access exceeds an access rate for the resource; and

responsive to determining that the access rate is exceeded, determining whether an allocation is provided for the application as indicated by the policy.

Chui does not teach controlling the execution of an application by determining whether the application is restricted and thereafter determining access for the restricted or unrestricted application.

The Examiner cites to *Chui* paragraph 007 which states:

[0007] To facilitate the setting of the above power saving options, some systems include pre-defined profiles, with descriptive names, such as "Super Power Saver", "Miser", "High Performance", "Projector Presentation", and so on. When the user selects one of these profiles, the device is configured using predefined parameters for each of the profiles. For example, in the "miser" profile, the inactivity time parameter for turning the display off may be set to three minutes, whereas, in the "projector presentation" profile, the inactivity time parameter may be set to at least an hour. In like manner, a disk drive may be set to turn off during periods of inactivity when the device is operated on battery power, but to remain on when the device is connected to a power supply.

The above cited section of *Chui* teaches there are pre-defined profiles that can be selected by the user and assigned to a device. However, nothing in the above cited section of *Chui* teaches any of the features claimed in claim 6. Therefore, *Chui* fails to anticipate claim 6. Accordingly, the rejection under 35 U.S.C. 102 is overcome.

I.C. Claim 9

In rejecting claim 9 the Examiner states:

With regard to claim 9. *Chui* teaches building a profile of a resource consumption for the application (see at least paragraph 0020)

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The rejection with respect to claim is respectfully traversed. Amended claim 9 states:

9. (Currently Amended) The method of claim 1, wherein setting a policy for an application further comprises:
examining a resource usage of the application on the data processing system;
adding the application to the list of permitted applications if the application is to be always permitted;
adding the application to the list of banned applications if the application is to be always denied; and
building a profile of resource consumption for the application, wherein the profile is included in the policy.

Chui does not teach the features “examining the resource usage of the application on the data processing system; adding the application to the list of permitted applications if the application is to be

always permitted; adding the application to the list of banned applications if the application is to be always denied, as recited in claim 9. The Examiner cites to Chui paragraph 0020 which states:

[0020] By independently controlling the power to each component 180a-z within the device, a user's priority can be accommodated for allocating power to functions or components that are deemed to be more important to that user, or for the particular situation that the user encounters. Also, by independently controlling the power to each component 180a-z within the device, power can be allocated based on the power consumption of each component, to assure that high power consuming components are shut down sooner than low power consuming components, thereby improving the effective battery life without risking a loss of data.

The above cited section of *Chui* teaches that the power for each component in the device can be independently controlled based on a user's priority. *Chui* further teaches that independently controlling the power to each component assures that high power consuming components are shut down sooner than low power consuming components. However, nothing in the above cited section of *Chui* teaches that a profile is built for *an application* executing in the device. Moreover, *Chui* does not teach that the application is added to a list of permitted or banned applications. *Chui* fails to teach each and every feature of claim 9. Therefore, *Chui* fails to anticipate claim 9. Accordingly, the rejection under 35 U.S.C. 102 is overcome.

I.D. Claims 12 and 14

In rejecting claims 12 and 14 the Examiner states:

With regard to claim 12, *Chui* teaches a method, in a data processing system, for controlling execution of applications, the method of comprising:

Responsive to moving to battery power, identifying at least one application (disk drive may be set to turn off during periods of inactivity when the device is operated on battery power, but to remain on when the device is connected to a power supply) (see at least paragraph 0007)

Determining whether to terminate or suspend the at least one application (see at least paragraphs 0007 and 0019)

Office Action on April 1, 2008, page 5.

Applicants have amended claim 12. The rejection with respect to claim 12 is respectfully traversed. Amended claim 12 states:

12. (Currently Amended) A method, in a data processing system, for controlling execution of applications, the method of comprising:
responsive to moving to battery power, identifying at least one application and determining whether at least one application belongs to a list of permitted applications;

responsive to determining that the at least one application does not belong to the list of permitted applications, determining whether to terminate or suspend the at least one application; and
responsive to a determination to terminate the at least one application, terminating the at least one application.

Chui does not teach the feature determining whether at least one application belongs to a list of permitted applications, as recited in claim 12. As discussed above, paragraph 0007 teaches there are pre-defined profiles that can be selected by the user and assigned to a device. However, the Examiner also cites to *Chui* paragraph 0019 which states:

[0019] FIG. 1 illustrates an example block diagram of a power management system 100 in accordance with this invention. Of particular note, a controller 150 is configured to independently control the power that is supplied from a power supply 120 to individual components 180a-z within a portable device. The power estimator 130 provides a measure, or estimate, of currently available power from the power supply 120 to the controller 150 to effect this power-dependent control.

Paragraph 0019 of *Chui* describes a power management system that is configured to control the power that is allocated to individual components. However, *Chui* fails to teach determining whether at least one application belongs to a list of permitted or banned applications and determining whether to terminate or suspend the application. Therefore, *Chui* fails to anticipate claim 12. Accordingly, the rejection under 35 U.S.C. 102 is overcome.

Claim 14 is dependent on claim 12 and recites similar subject matter with regard to claim 12. Therefore, at least by virtue of the dependence on claim 12, *Chui* does not anticipate claim 14.

II. 35 U.S.C. § 103 Obviousness

The Examiner has rejected claim 15 under 35 U.S.C. § 103 as obvious over *Chui* (U.S. 2003/0158609) (hereinafter “*Chui*”) in view of *Yang et al.* (U.S. 7,010,714) (hereinafter “*Yang*”). This rejection is respectfully traversed.

The Examiner bears the burden of establishing a *prima facie* case of obviousness based on prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). The prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In determining obviousness, the scope and content of the prior art are... determined; differences between the prior art and the claims at issue are... ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or non-obviousness of the subject matter is determined. *Graham v. John*

Deere Co., 383 U.S. 1 (1966). Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *KSR Int'l. Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007). Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006)).

In regards to claim 15, the Examiner admits that *Chui* does not specifically teach registering the at least one application to restart when the data processing system is no longer using battery power. However, the Examiner asserts that *Yang* makes up for the deficiencies of *Chui*. In rejecting claim 15 the Examiner asserts:

Yang teaches registering the at least one application to restart when the data processing system is no longer using battery power in analogous art of dynamically adjusting power consumption of a CPU in a computer system for the purposes of, “a mobile CPU runs at a speed virtually identical to that of a desktop system when the notebook computer is connected to an AC outlet” (see at least column 2, lines 5-10)

Office Action of April 1, 2008, page 6

Amended claim 15 is as follows:

15. (Currently Amended) The method of claim 12, further comprising:
determining whether to register the at least one application to restart
when the data processing system is no longer using the limited resource;
responsive to a determination to register the at least one application,
registering the at least one application to restart when the data processing system
is no longer using the limited resource.

Amended claim 15 is non-obvious in view of the cited references, considered as a whole, because the proposed combination does not teach or suggest all of the features of amended claim 15. Yang teaches an apparatus for dynamically adjusting power consumption of a CPU in a computer system. The examiner cites to the following as teaching the feature of claim 15.

The SpeedStep technology described above and developed by Intel can be directly controlled by the operation system. This SpeedStep technology permits the operation system to arrange the running schedule of the CPU to reduce the power consumption in accordance with its job condition.

Yang, col. 2, lines 5-10.

The above cited section teaches the operation system can be controlled by the SpeedStep technology. The technology permits the operation system to arrange the running schedule on the CPU to reduce power. However, nothing in *Yang* teaches determining whether to register the at least one

application to restart when the data processing system is no longer using the limited resource as recited in claim 15. *Yang* fails to make up for the deficiencies of *Chui*. Therefore, the Examiner fails to state a *prima facie* obviousness rejection of claim 15. Accordingly, the rejection of claim 15 under 35 U.S.C. § 103 has been overcome.

III. Conclusion

It is respectfully urged that the subject application is patentable over the cited reference(s) and is now in condition for allowance.

The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

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